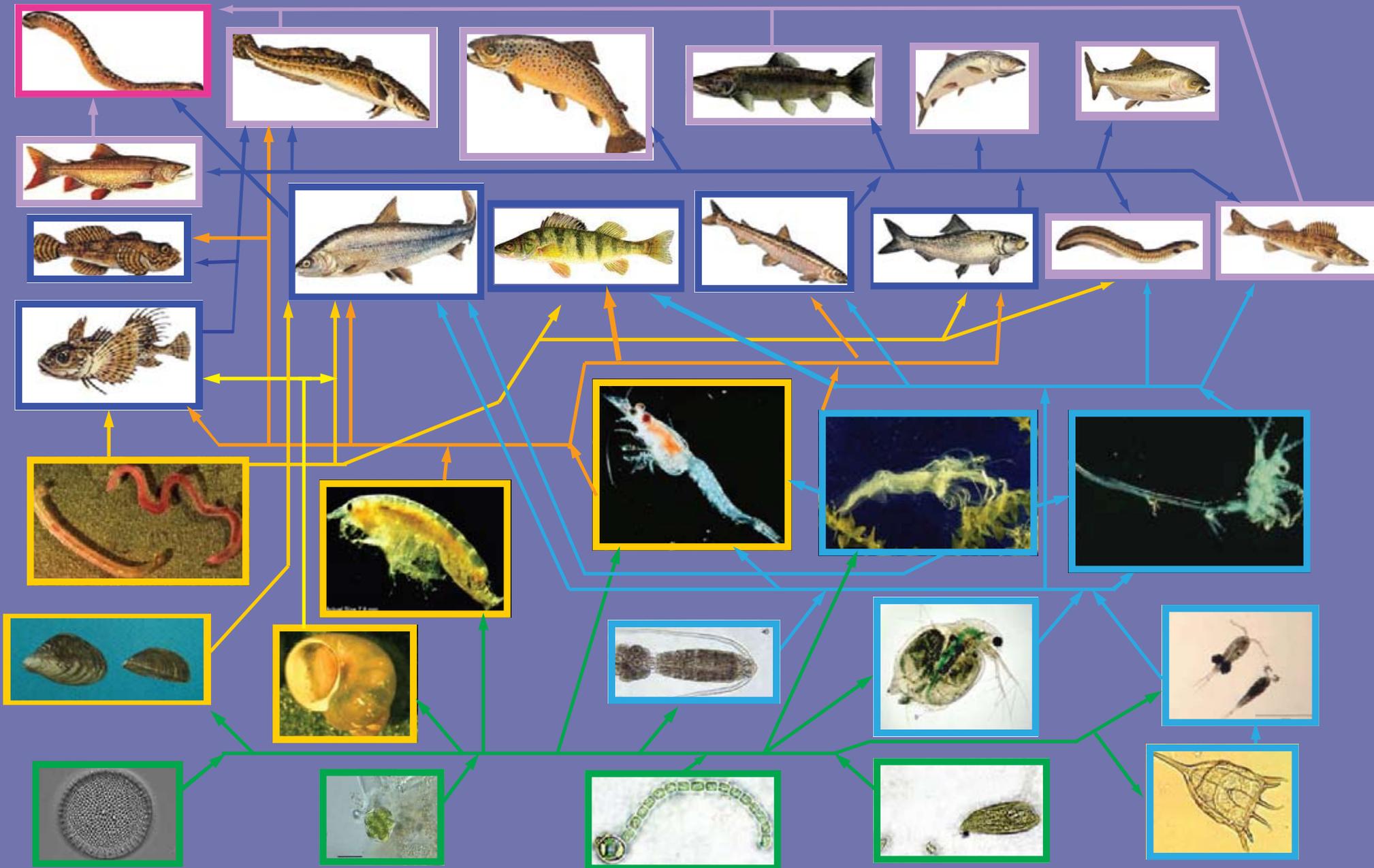




Lake Ontario Food Web



Food Web based on model constructed for "Impact of Exotic Invertebrate Invaders on Food Web Structure and Function in the Great Lakes: a Network Analysis Approach" by Mason, Krause and Ulanowicz—2002 Modifications for Lake Ontario—2008.

Sea Lamprey



Sea lamprey (*Petromyzon marinus*) - An aggressive, non-native parasite that fastens onto its prey and rasps out a hole with its rough tongue.

Piscivores (Fish Eaters)



Atlantic salmon (*Salmo Salar*) - A valuable sport and commercial fish. More aggressive than other types of salmon and are likely to attack other fish.



American eel (*Ancorhynchus mykiss*) - The American eel is a catadromous fish; it lives most of its life in freshwater and migrates to the ocean to spawn.



Lake trout (*Salvelinus namaycush*) - Once the most valuable commercial fish in the Upper Great Lakes.



Brown trout (*Salmo trutta*) - A European species introduced in the late 1880's, mostly supported by stocking. Readily feed on invasive prey species such as alewives, gobies, and rusty crayfish.



Walleye (*Stizostedion vitreum*) - Native coolwater species found in nearshore areas.



Burbot (*Lota lota*) - Elongated, cylindrical, freshwater codfish.



Coho salmon (*Oncorhynchus kistuch*) - Weighs on average 5-6 pounds, but can weigh up 10 pounds.



Chinook salmon (*Oncorhynchus tshawytscha*) - Pacific salmon species stocked as a trophy fish and to control alewife. Natural reproduction may currently account for 85% of the stock.

Forage Fish



Slimy sculpin (*Cottus cognatis*) - Native, nocturnal inhabitant of nearshore areas where it primarily eats invertebrates.



Lake whitefish (*Coregonus clupeaformis*) - Native that schools in cold, deep waters. Bottom feeder, feeds on *Diporeia* and zebra and quagga mussels.



Yellow Perch (*Perca flavescens*) - Native that schools near shore, usually at depths less than 30 feet.



Rainbow smelt (*Osmerus mordax*) - Carnivorous fish that usually schools in the dark, cool offshore depths.



Alewife (*Alosa pseudoharengus*) - Atlantic species that invaded in 1949 via the Welland canal, now the major prey for Lake Michigan's trout and salmon.



Deepwater sculpin (*Myoxocephalus quadricornis thompsonii*) - A native glacial relic that lives at the bottom of cold, deep water feeding largely on aquatic invertebrates.

122 species of fish, including at least 8 non-natives, make their homes in the waters of Lake Ontario. 7 species of native fish have been extirpated from Lake Ontario. This food web includes only the dominant species.

MacroInvertebrates



Chironomids/Oligochaetes - Larval insects and worms living on the lake bottom. Species present are a good indicator of water quality.



Amphipods (*Diporeia*) - The most common species of amphipod found in fish diets.



Opossum shrimp (*Mysis relicta*) - Omnivore feeding on algae and small cladocerans. Migrates into the water column at night.



Mollusks - A mixture of native and non-native species of snails and clams are eaten by lake whitefish and other bottom feeding fish.



Zebra & quagga mussels (*Dreissena polymorpha* and *Dreissena bugensis*) - Invaded Lake Ontario in 1989/1990, filter-feeders that remove huge quantities of plankton.

Zooplankton (Microscopic animals found in the water column)



Native raptorial waterflea (*Leptodora kindti*) - Slow moving and patchy distribution of small swarms at relatively low numbers.



Invasive Fishhook and Spiny waterfleas (*Bythotrephes longimanus*) - Raptorial predator found at high densities.



Cyclopoid copepods (*Cyclops bicuspidatus*) - One of six carnivorous cyclopoid copepod species in Lake Ontario.



Native waterfleas (*Daphnia galeata*) - More than 20 species of native filter-feeding waterfleas live in Lake Ontario. Photo Credit : Dr. James F. Haney.



Calanoid copepods (*Diaptomus spp.*) - Ten species of native calanoid copepods live in Lake Ontario. Calanoid copepods are omnivores but prefer active prey.



Rotifers - Omnivorous microscopic animals that package the smallest particles, including small phytoplankton and wastes into a form that can be eaten by larger zooplankton.

Phytoplankton (Algae found in the water column)



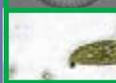
Blue-green algae - Largely inedible and frequently toxic, these algae often form large blooms.



Green algae - Microscopic (single-celled) plants that form the main support of the summer food web.



Diatoms - Cold-loving microscopic (single celled) plants encased in silica shells that support the first wave of production in the spring.



Flagellates - Motile, single-celled plants or animals frequently found in high numbers. Most eat bacteria and so may help funnel bacterial products back into the food chain.